



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/117,799	08/06/1998	WOLFGANG FRAAS	P98.1428	4083

21171 7590 01/15/2004

STAAS & HALSEY LLP
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER

TSEGAYE, SABA

ART UNIT	PAPER NUMBER
----------	--------------

2662

DATE MAILED: 01/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/117,799

Applicant(s)

FRAAS ET AL.

Examiner

Saba Tsegaye

Art Unit

2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other:

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: on page 8, line 30 the word IWF; on page 9, line 20; and on page 10, line 16, the word ISDN are misspelled.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. Claims 1-4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duault et al. (US 5,638,365) in view of Norizuki et al. (US 5,675,574) and Yamada et al. (US 5,412,655).

Regarding claims 1, 3, 4 and 6, Duault discloses, in Fig. 5, a transmission system for transmitting digital signals between TDM-based terminal equipment (DTE) (as in claim 6) comprising:

an ATM network (13) having user interfaces (column 5, lines 52-55) (as in claims 1, 3 and 6);

connection units (15) provided respectively at the exchange termination to respectively connect the exchange termination to one of the user interfaces of the ATM network (as in claims 1, 4 and 6); and

conversion units (IWF) to convert time-division multiples data into ATM cells, or ATM cells into time-division multiples data (column 5, lines 50-55) (as in claims 1 and 4).


Art Unit: 2662

Further, Duault describes that interconnection of PBXs presents requirements to

① multiplex several TDM channel in an ATM connection. It has the advantage to decrease the cell payload assembly delay.

② However, Duault does not expressly disclose: an LT, which is the ET and the LT respectively connected to ATM network (as in claim 1); and an allocation unit to allocate a virtual ATM channel to each TDM channel (as in claims 1 and 4).

③ Norizuki teaches, in Figs. 2B and 3B, a PBX that comprises a time division-multiplexing unit 14; interface 213, 216, 18, 220 (claimed line termination to one of the user interfaces of the ATM network); an ATM multiplexing transmission unit 16, 21 comprises an ATM adaptation layer 17, 212, 217, 219 (claimed conversion units at the line termination) (column 4, lines 35-54; column 5, lines 1-9). Further, Norizuki teaches, in Fig. 8, cell assembly 213i, disassemble 213a, FSYNC 213f and SYNC 212a (column 7, line 27-column 8, line 50).

④ It would have been obvious to one ordinary skill in the art at the time the invention was made to substitute an line termination, such as that suggested by Norizuki, to the DTE of Duault in order provide a connection between ATM network and a TDM network and to enable a narrow-band communication between subscriber terminals. } 

Yamada teaches an assembly/disassembly system containing a cell assembly receives TDM data to assemble ATM cells by storing the TDM data into the respective banks according to the virtual channels. The cell disassembly receives ATM cells from the ATM highway to disassemble the ATM cell (ATM cell is formed for each virtual channel of received ATM cells) into TDM data (column 3, lines 14-64; column 5, line 39-column 6, line 30; abstract).

Art Unit: 2662

It would have been obvious to one ordinary skill in the art at the time the invention was made to substitute an allocation unit that allocate a virtual ATM channel to each TDM channel, such as that suggested by Yamada, to the allocation unit, in the circuit emulation service of Duault in order to distribute signals of each TDM channels to respectively ATM cells.

Regarding claim 2, Duault discloses a transmission system further comprising a switching device for switching time division multiples digital signal between a plurality of exchange terminations wherein the plurality of exchange terminations of the switching device are connected to a single user interface of an ATM network (column 5, lines 50-55).

3. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Duault in view of Norizuki and Yamada as applied to claim 1 above, and further in view of Helbig et al. (US 5,673,258).

Duault in view of Norizuki and Yamada discloses all the claim limitations as stated above except for a V1 reference point between the exchange termination and the line termination.

Helbig discloses, in Fig. 3, a V reference point between exchange termination and the line termination. As shown in Fig. 3, between different functional groups (ET, LT, NT, TE), certain reference points are defined, which separate the functional groups from one another.

It would have been obvious to one ordinary skill in the art at the time the invention was made to add a V reference point between exchange termination and the line termination, such as that suggested by Helbig, in the ATM network of Duault in view of Norizuki and Yamada in order to comply the standard since the V is the reference point between the exchange termination

Art Unit: 2662

and the line termination so would be logical to make the ATM network the V reference to comply with the standard.

Response to Arguments

4. Applicant's arguments filed 10/16/03 have been fully considered but they are not persuasive. Applicant argues (Remarks, pages 4-5) that none of Norizuki et al., Duault et al., and Yamada et al. taken alone or in any proper combination, disclose or suggest "a TDM network connected via an exchange termination, TDM-based terminal equipment connected via a line termination, and connection units provided at the exchange termination and the line termination to connect each to an ATM network, as claimed".

However, Examiner disagrees with Applicant contention. Duault clearly teaches TDM network connected via an exchange termination. As shown in Fig. 5, the Interworking function 15, converts TDM data into ATM cells, or ATM cells into TDM data. Further, Duault suggests that interconnection of PBXs presents requirements to multiplex several TDM channels in an ATM connection in order to decrease the cell assembly delay. Yamada teaches an assembly/disassembly system for allocate a virtual ATM channel to each TDM channel. Norizuki teaches TDM based terminal equipment connected via a line termination. As shown in Figs. 2B and 3B, interfaces 213, 218, 220 establish an interface between a data, image and speech terminals and ATM multiplexing transmission unit. Therefore, the combined teaching of the Duault, Norizuki and Yamada patents in relation to the claimed invention is appropriate.

Art Unit: 2662

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Saba Tsegaye whose telephone number is (703) 308-4754. The examiner can normally be reached on Monday-Friday (7:30-5:00), First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (703) 305-4744. The fax phone numbers for the organization where this application or proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.

ST

January 9, 2004


HASSAN KIZOU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600